

THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	:	Doctor of Education (EdD)
Course Title	:	Directed study – ICT2: Research on ICT in Education and Related Ethical Issues
Course Code	:	INT7011
Department	:	Mathematics and Information Technology
Credit Points	:	3
Course Hours	:	39 hours
Pre-requisite(s)	:	Nil
Medium of Instruction	:	English
Level	:	Foundation Stage

Part II

1. Synopsis

The course is designed to prepare candidates for the research-oriented courses at the later stages within their study period. Candidates will be engaged in an academic inquiry project on the integration of the use of ICT into school education. Opportunities will be provided for candidates to specifically identify a target scope deserving of further research effort in the field of ICT in education, critically review academic work and research reports on the target scope, and thoughtfully formulate research problems and theoretical models concerning the target scope.

2. Course Intended Learning Outcomes (CILOs)

Upon completion of this course, students will be able to:

- CILO₁ master the comprehensive knowledge and advanced skills of commonly-used research methods for the field of ICT in education;
- CILO₂ concentrate research focus on a particular area in the field of ICT in education based on personal interest or everyday experience;
- CILO₃ gain research insights into the target area in the field of ICT in education based on early literature and related documents;
- CILO₄ establish research problems for the target area in the field of ICT in education based on literature review and personal experience;

CILO₅ beware of ethical issues in the research on ICT in education.

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Debate about the performance of experimental research and the development of research instruments in the field of ICT in education	<i>CILO_{1,3}</i>	Lecture, Debate
Identification of possible areas deserving of further research effort in the field of ICT in education	<i>CILO₃</i>	Lecturer-led Q&A, Guided Research Activities
Selection of research scope	<i>CILO_{2,3}</i>	Lecturer-led Q&A, Guided Research Activities
Analysis of relevant literature	<i>CILO_{2,3}</i>	Lecturer-led Q&A, Guided Research Activities
Formulation of research problems	<i>CILO₄</i>	Lecturer-led Q&A, Guided Research Activities
Concern about ethical issues (such as copyright of digital learning content, piracy, open access, and creative commons) in the research on ICT in education	<i>CILO₅</i>	Lecturer-led Q&A, Guided Research Activities

4. Assessment

Assessment Tasks	Weighting (%)	CILO
Based on a critical review on a number of academic publications, candidates are required to formulate a research problem on the research on the integration of the use of ICT into school education (4000-5000 words)	100	<i>CILO_{1,2,3,4,5}</i>

5. Required Text(s)

Nil

6. Recommended Readings

- Acha, J. (2009). The effectiveness of multimedia programmes in children's vocabulary learning. *British Journal of Educational Technology*, 40(1), 23-31.
- Andrews, R., Freeman, A., Hou, D., McGuinn, N., Robinson, A., & Zhu, J. (2007). The effectiveness of information and communication technology on the learning of written English for 5- to 16-year-olds. *British Journal of Educational Technology*, 38(2), 325-336.
- Bell, P. (2004). On the theoretical breadth of design-based research in education. *Educational Psychologist*, 39(4), 243-253.
- Cavus, N., & Ibrahim, D. (2009). m-Learning: an experiment in using SMS to support learning new English language words. *British Journal of Educational Technology*, 40(1), 78-91.
- Dalacosta, K., Kamariotaki-Paparrigopoulou, M., Palyvos, J. A., & Spyrellis, N. (2009). Multimedia application with animated cartoons for teaching science in elementary education. *Computers and Education*, 52(4), 741-748.
- English, R. (2006). *Maths and ICT in the primary school: a creative approach*. London: David Fulton.
- Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, Teaching, and Scholarship in a Digital Age. *Educational Researcher*. 38(4), 246-289
- Hoadley, C. M. (2004). Methodological alignment in design-based research. *Educational Psychologist*, 39(4), 203-212.
- Jang, S. J. (2009). Exploration of secondary students' creativity by integrating web-based technology into an innovative science curriculum. *Computers and Education*, 52(1), 247-255.
- Johnston-Wilder, S., & Pimm, D. (2005). *Teaching secondary mathematics with ICT*. Maidenhead, England: Open University Press.
- Kenning, M. M. (2007). *ICT and language learning: from print to the mobile phone*. Basingstoke, England: Palgrave Macmillan.
- Kong, S. C. (2008). The development of a cognitive tool for teaching and learning fractions in the mathematics classroom: a design-based study. *Computers and Education*, 51(2), 886-899.
- Lim, C. P. (2008). Global citizenship education, school curriculum and games: learning Mathematics, English and Science as a global citizen. *Computers and Education*, 51(3), 1073-1093.
- Oldknow, A., & Taylor, R. (2003). *Teaching mathematics using ICT*. London: Continuum.
- Ruthven, K., & Hennessy, S. (2002). A practitioner model of the use of computer-based tools and resources to support mathematics teaching and learning. *Educational Studies in Mathematics*, 49(1), 47-88.
- Spector, J. M., Merrill, M. D., van Merriënboer, J., & Driscoll, M. P. (Eds.). (2008). *Handbook of research on educational communications and technology (3rd ed.)*.

New York: Lawrence Erlbaum Associates.

Sun, K. T., Lin, Y. C., & Yu, C. J. (2008). A study on learning effect among different learning styles in a Web-based lab of science for elementary school students. *Computers and Education*, 50(4), 1411-1422.

Warwick, P., Wilson, E., & Winterbottom, M. (2006). *Teaching and learning primary science with ICT*. Maidenhead: Open University Press.

7. Related Web Resources

The Digital Learning Challenge: Obstacles to Educational Uses of Copyrighted Material in the Digital Age: A Foundational White Paper

<http://cyber.law.harvard.edu/media/files/copyrightandeducation.html>

Creative Commons:

<http://creativecommons.org/>

Lessig Blog:

<http://www.lessig.org/blog/>

8. Related Journals

Selected articles from international refereed journals will be recommended during the course delivery.

9. Academic Honesty

The University adopts a zero tolerance policy to plagiarism. For the University's policy on plagiarism, please refer to the *Policy on Academic Honesty, Responsibility and Integrity with Specific Reference to the Avoidance of Plagiarism by Students* (<https://www.eduhk.hk/re/modules/downloads/visit.php?cid=9&lid=89>). Students should familiarize themselves with the Policy.

10. Others

Nil

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